

SEQUENCE LISTING

<110> Rossi, Alexander B.

<120> Production of Cultured Human Mast Cells and Basophils for High Throughput Small Molecule Drug Discovery

<130> A-70882/RMS/AMS

<150> US 60/316,723

<151> 2001-08-31

<160> 42

<170> PatentIn version 3.1

<210> 1

<211> 156

<212> PRT

<213> Homo sapiens

<400> 1

Met Thr Gln Asp Cys Ser Phe Gln His Ser Pro Ile Ser Ser Asp Phe  
1 5 10 15

Ala Val Lys Ile Arg Glu Leu Ser Asp Tyr Leu Leu Gln Asp Tyr Pro  
20 25 30

Val Thr Val Ala Ser Asn Leu Gln Asp Glu Glu Leu Cys Gly Gly Leu  
35 40 45

Trp Arg Leu Val Leu Ala Gln Arg Trp Met Glu Arg Leu Lys Thr Val  
50 55 60

Ala Gly Ser Lys Met Gln Gly Leu Leu Glu Arg Val Asn Thr Glu Ile  
65 70 75 80

His Phe Val Thr Lys Cys Ala Phe Gln Pro Pro Pro Ser Cys Leu Arg  
85 90 95

Phe Val Gln Thr Asn Ile Ser Arg Leu Leu Gln Glu Thr Ser Glu Gln  
100 105 110

Leu Val Ala Leu Lys Pro Trp Ile Thr Arg Gln Asn Phe Ser Arg Cys  
115 120 125

Leu Glu Leu Gln Cys Gln Pro Asp Ser Ser Thr Leu Pro Pro Pro Trp  
130 135 140

Ser Pro Arg Pro Leu Glu Ala Thr Ala Pro Thr Ala  
145 150 155

<210> 2  
<211> 165  
<212> PRT  
<213> Homo sapiens

<400> 2

Met Glu Gly Ile Cys Arg Asn Arg Val Thr Asn Asn Val Lys Asp Val  
1 5 10 15

Thr Lys Leu Val Ala Asn Leu Pro Lys Asp Tyr Met Ile Thr Leu Lys  
20 25 30

Tyr Val Pro Gly Met Asp Val Leu Pro Ser His Cys Trp Ile Ser Glu  
35 40 45

Met Val Val Gln Leu Ser Asp Ser Leu Thr Asp Leu Leu Asp Lys Phe  
50 55 60

Ser Asn Ile Ser Glu Gly Leu Ser Asn Tyr Ser Ile Ile Asp Lys Leu  
65 70 75 80

Val Asn Ile Val Asp Asp Leu Val Glu Cys Val Lys Glu Asn Ser Ser  
85 90 95

Lys Asp Leu Lys Ser Phe Lys Ser Pro Glu Pro Arg Leu Phe Thr  
100 105 110

Pro Glu Glu Phe Phe Arg Ile Phe Asn Arg Ser Ile Asp Ala Phe Lys  
115 120 125

Asp Phe Val Val Ala Ser Glu Thr Ser Asp Cys Val Val Ser Ser Thr  
130 135 140

Leu Ser Pro Glu Lys Asp Ser Arg Val Ser Val Thr Lys Pro Phe Met  
145 150 155 160

Leu Pro Pro Val Ala  
165

<210> 3  
<211> 184

<212> PRT  
<213> Homo sapiens

<400> 3

Pro Val Pro Pro Gly Glu Asp Ser Lys Asp Val Ala Ala Pro His Arg  
1 5 10 15

Gln Pro Leu Thr Ser Ser Glu Arg Ile Asp Lys Gln Ile Arg Tyr Ile  
20 25 30

Leu Asp Gly Ile Ser Ala Leu Arg Lys Glu Thr Cys Asn Lys Ser Asn  
35 40 45

Met Cys Glu Ser Ser Lys Glu Ala Leu Ala Glu Asn Asn Leu Asn Leu  
50 55 60

Pro Lys Met Ala Glu Lys Asp Gly Cys Phe Gln Ser Gly Phe Asn Glu  
65 70 75 80

Glu Thr Cys Leu Val Lys Ile Ile Thr Gly Leu Leu Glu Phe Glu Val  
85 90 95

Tyr Leu Glu Tyr Leu Gln Asn Arg Phe Glu Ser Ser Glu Glu Gln Ala  
100 105 110

Arg Ala Val Gln Met Ser Thr Lys Val Leu Ile Gln Phe Leu Gln Lys  
115 120 125

Lys Ala Lys Asn Leu Asp Ala Ile Thr Thr Pro Asp Pro Thr Thr Asn  
130 135 140

Ala Ser Leu Leu Thr Lys Leu Gln Ala Gln Asn Gln Trp Leu Gln Asp  
145 150 155 160

Met Thr Thr His Leu Ile Leu Arg Ser Phe Lys Glu Phe Leu Gln Ser  
165 170 175

Ser Leu Arg Ala Leu Arg Gln Met  
180

<210> 4  
<211> 130  
<212> PRT  
<213> Homo sapiens

<400> 4

Met His Lys Cys Asp Ile Thr Leu Gln Glu Ile Ile Lys Thr Leu Asn  
1 5 10 15

Ser Leu Thr Glu Gln Lys Thr Leu Cys Thr Glu Leu Thr Val Thr Asp  
20 25 30

Ile Phe Ala Ala Ser Lys Asn Thr Thr Glu Lys Glu Thr Phe Cys Arg  
35 40 45

Ala Ala Thr Val Leu Arg Gln Phe Tyr Ser His His Glu Lys Asp Thr  
50 55 60

Arg Cys Leu Gly Ala Thr Ala Gln Gln Phe His Arg His Lys Gln Leu  
65 70 75 80

Ile Arg Phe Leu Lys Arg Leu Asp Arg Asn Leu Trp Gly Leu Ala Gly  
85 90 95

Leu Asn Ser Cys Pro Val Lys Glu Ala Asn Gln Ser Thr Leu Glu Asn  
100 105 110

Phe Leu Glu Arg Leu Lys Thr Ile Met Arg Glu Lys Tyr Ser Lys Cys  
115 120 125

Ser Ser  
130

<210> 5

<211> 134

<212> PRT

<213> Homo sapiens

<400> 5

Met Ala Pro Met Thr Gln Thr Thr Ser Leu Lys Thr Ser Trp Val Asn  
1 5 10 15

Cys Ser Asn Met Ile Asp Glu Ile Ile Thr His Leu Lys Gln Pro Pro  
20 25 30

Leu Pro Leu Leu Asp Phe Asn Asn Leu Asn Gly Glu Asp Gln Asp Ile  
35 40 45

Leu Met Glu Asn Asn Leu Arg Arg Pro Asn Leu Glu Ala Phe Asn Arg

50

55

60

Ala Val Lys Ser Leu Gln Asn Ala Ser Ala Ile Glu Ser Ile Leu Lys  
65 70 75 80

Asn Leu Leu Pro Cys Leu Pro Leu Ala Thr Ala Ala Pro Thr Arg His  
85 90 95

Pro Ile His Ile Lys Asp Gly Asp Trp Asn Glu Phe Arg Arg Lys Leu  
100 105 110

Thr Phe Tyr Leu Lys Thr Leu Glu Asn Ala Gln Ala Gln Gln Thr Thr  
115 120 125

Leu Ser Leu Ala Ile Phe  
130

<210> 6  
<211> 61  
<212> PRT  
<213> Artificial sequence

<220>  
<223> coiled-coil presentation structure

<400> 6

Met Gly Cys Ala Ala Leu Glu Ser Glu Val Ser Ala Leu Glu Ser Glu  
1 5 10 15

Val Ala Ser Leu Glu Ser Glu Val Ala Ala Leu Gly Arg Gly Asp Met  
20 25 30

Pro Leu Ala Ala Val Lys Ser Lys Leu Ser Ala Val Lys Ser Lys Leu  
35 40 45

Ala Ser Val Lys Ser Lys Leu Ala Ala Cys Gly Pro Pro  
50 55 60

<210> 7  
<211> 6  
<212> PRT  
<213> Artificial sequence

<220>  
<223> loop structure of coiled-coil presentation structure

<400> 7

Gly Arg Gly Asp Met Pro  
1 5

<210> 8  
<211> 69  
<212> PRT  
<213> Artificial sequence

<220>  
<223> minibody presentation structure

<400> 8

Met Gly Arg Asn Ser Gln Ala Thr Ser Gly Phe Thr Phe Ser His Phe  
1 5 10 15

Tyr Met Glu Trp Val Arg Gly Gly Glu Tyr Ile Ala Ala Ser Arg His  
20 25 30

Lys His Asn Lys Tyr Thr Thr Glu Tyr Ser Ala Ser Val Lys Gly Arg  
35 40 45

Tyr Ile Val Ser Arg Asp Thr Ser Gln Ser Ile Leu Tyr Leu Gln Lys  
50 55 60

Lys Lys Gly Pro Pro  
65

<210> 9  
<211> 7  
<212> PRT  
<213> Simian virus 40

<400> 9

Pro Lys Lys Lys Arg Lys Val  
1 5

<210> 10  
<211> 6  
<212> PRT  
<213> Homo sapiens

<400> 10

Ala Arg Arg Arg Arg Pro  
1 5

<210> 11

<211> 10  
<212> PRT  
<213> Mus musculus

<400> 11

Glu Glu Val Gln Arg Lys Arg Gln Lys Leu  
1 5 10

<210> 12  
<211> 9  
<212> PRT  
<213> Mus musculus

<400> 12

Glu Glu Lys Arg Lys Arg Thr Tyr Glu  
1 5

<210> 13  
<211> 20  
<212> PRT  
<213> Xenopus laevis

<400> 13

Ala Val Lys Arg Pro Ala Ala Thr Lys Lys Ala Gly Gln Ala Lys Lys  
1 5 10 15

Lys Lys Leu Asp  
20

<210> 14  
<211> 31  
<212> PRT  
<213> Mus musculus

<400> 14

Met Ala Ser Pro Leu Thr Arg Phe Leu Ser Leu Asn Leu Leu Leu Leu  
1 5 10 15

Gly Glu Ser Ile Leu Gly Ser Gly Glu Ala Lys Pro Gln Ala Pro  
20 25 30

<210> 15  
<211> 21  
<212> PRT  
<213> Homo sapiens

<400> 15

Met Ser Ser Phe Gly Tyr Arg Thr Leu Thr Val Ala Leu Phe Thr Leu  
1 5 10 15

Ile Cys Cys Pro Gly  
20

<210> 16  
<211> 51  
<212> PRT  
<213> Mus musculus

<400> 16

Pro Gln Arg Pro Glu Asp Cys Arg Pro Arg Gly Ser Val Lys Gly Thr  
1 5 10 15

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly  
20 25 30

Ile Cys Val Ala Leu Leu Ser Leu Ile Ile Thr Leu Ile Cys Tyr  
35 40 45

His Ser Arg  
50

<210> 17  
<211> 33  
<212> PRT  
<213> Homo sapiens

<400> 17

Met Val Ile Ile Val Thr Val Val Ser Val Leu Leu Ser Leu Phe Val  
1 5 10 15

Thr Ser Val Leu Leu Cys Phe Ile Phe Gly Gln His Leu Arg Gln Gln  
20 25 30

Arg

<210> 18  
<211> 37  
<212> PRT  
<213> Rattus sp.

<400> 18

Pro Asn Lys Gly Ser Gly Thr Thr Ser Gly Thr Thr Arg Leu Leu Ser

1

5

10

15

Gly His Thr Cys Phe Thr Leu Thr Gly Leu Leu Gly Thr Leu Val Thr  
20 25 30

Met Gly Leu Leu Thr  
35

<210> 19  
<211> 14  
<212> PRT  
<213> Homo sapiens

<400> 19

Met Gly Ser Ser Lys Ser Lys Pro Lys Asp Pro Ser Gln Arg  
1 5 10

<210> 20  
<211> 26  
<212> PRT  
<213> Homo sapiens

<400> 20

Leu Leu Gln Arg Leu Phe Ser Arg Gln Asp Cys Cys Gly Asn Cys Ser  
1 5 10 15

Asp Ser Glu Glu Glu Leu Pro Thr Arg Leu  
20 25

<210> 21  
<211> 20  
<212> PRT  
<213> Rattus norvegicus

<400> 21

Lys Gln Phe Arg Asn Cys Met Leu Thr Ser Leu Cys Cys Gly Lys Asn  
1 5 10 15

Pro Leu Gly Asp  
20

<210> 22  
<211> 19  
<212> PRT  
<213> Homo sapiens

<400> 22

Leu Asn Pro Pro Asp Glu Ser Gly Pro Gly Cys Met Ser Cys Lys Cys  
1 5 10 15

Val Leu Ser

<210> 23  
<211> 5  
<212> PRT  
<213> Artificial sequence

<220>  
<223> lysosomal degradation sequence

<400> 23

Lys Phe Glu Arg Gln  
1 5

<210> 24  
<211> 36  
<212> PRT  
<213> Cricetulus griseus

<400> 24

Met Leu Ile Pro Ile Ala Gly Phe Phe Ala Leu Ala Gly Leu Val Leu  
1 5 10 15

Ile Val Leu Ile Ala Tyr Leu Ile Gly Arg Lys Arg Ser His Ala Gly  
20 25 30

Tyr Gln Thr Ile  
35

<210> 25  
<211> 35  
<212> PRT  
<213> Homo sapiens

<400> 25

Leu Val Pro Ile Ala Val Gly Ala Ala Leu Ala Gly Val Leu Ile Leu  
1 5 10 15

Val Leu Leu Ala Tyr Phe Ile Gly Leu Lys His His His Ala Gly Tyr  
20 25 30

Glu Gln Phe

<210> 26  
<211> 27  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 26

Met Leu Arg Thr Ser Ser Leu Phe Thr Arg Arg Val Gln Pro Ser Leu  
1 5 10 15

Phe Ser Arg Asn Ile Leu Arg Leu Gln Ser Thr  
20 25

<210> 27  
<211> 25  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 27

Met Leu Ser Leu Arg Gln Ser Ile Arg Phe Phe Lys Pro Ala Thr Arg  
1 5 10 15

Thr Leu Cys Ser Ser Arg Tyr Leu Leu  
20 25

<210> 28  
<211> 64  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 28

Met Phe Ser Met Leu Ser Lys Arg Trp Ala Gln Arg Thr Leu Ser Lys  
1 5 10 15

Ser Phe Tyr Ser Thr Ala Thr Gly Ala Ala Ser Lys Ser Gly Lys Leu  
20 25 30

Thr Gln Lys Leu Val Thr Ala Gly Val Ala Ala Ala Gly Ile Thr Ala  
35 40 45

Ser Thr Leu Leu Tyr Ala Asp Ser Leu Thr Ala Glu Ala Met Thr Ala  
50 55 60

<210> 29  
<211> 41

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 29

Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Leu Ala Thr Val  
1 5 10 15

Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr Asn Gln Leu  
20 25 30

Gln Gln Gln Gln Gln Arg Gly Lys Lys  
35 40

<210> 30

<211> 4

<212> PRT

<213> *Homo sapiens*

<400> 30

Lys Asp Glu Leu  
1

<210> 31

<211> 15

<212> PRT

<213> unidentified adenovirus

<400> 31

Leu Tyr Leu Ser Arg Arg Ser Phe Ile Asp Glu Lys Lys Met Pro  
1 5 10 15

<210> 32

<211> 19

<212> PRT

<213> *Homo sapiens*

<400> 32

Leu Asn Pro Pro Asp Glu Ser Gly Pro Gly Cys Met Ser Cys Lys Cys  
1 5 10 15

Val Leu Ser

<210> 33

<211> 15

<212> PRT

<213> *Homo sapiens*

<400> 33

Leu Thr Glu Pro Thr Gln Pro Thr Arg Asn Gln Cys Cys Ser Asn  
1 5 10 15

<210> 34

<211> 9

<212> PRT

<213> Unknown

<220>

<223> cyclin B1 destruction sequence

<400> 34

Arg Thr Ala Leu Gly Asp Ile Gly Asn  
1 5

<210> 35

<211> 20

<212> PRT

<213> Unknown

<220>

<223> signal sequence from Interleukin-2

<400> 35

Met Tyr Arg Met Gln Leu Leu Ser Cys Ile Ala Leu Ser Leu Ala Leu  
1 5 10 15

Val Thr Asn Ser

20

<210> 36

<211> 29

<212> PRT

<213> Homo sapiens

<400> 36

Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Ala Phe Gly Leu Leu  
1 5 10 15

Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala Phe Pro Thr

20

25

<210> 37

<211> 27

<212> PRT

<213> Homo sapiens

<400> 37

Met Ala Leu Trp Met Arg Leu Leu Pro Leu Leu Ala Leu Leu Ala Leu  
1 5 10 15

Trp Gly Pro Asp Pro Ala Ala Ala Phe Val Asn  
20 25

<210> 38

<211> 18

<212> PRT

<213> Influenza virus

<400> 38

Met Lys Ala Lys Leu Leu Val Leu Leu Tyr Ala Phe Val Ala Gly Asp  
1 5 10 15

Gln Ile

<210> 39

<211> 24

<212> PRT

<213> Unknown

<220>

<223> signal sequence from Interleukin-4

<400> 39

Met Gly Leu Thr Ser Gln Leu Leu Pro Pro Leu Phe Phe Leu Leu Ala  
1 5 10 15

Cys Ala Gly Asn Phe Val His Gly  
20

<210> 40

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> stability sequence

<220>

<221> MISC\_FEATURE

<222> (3)..(6)

<223> "Xaa" at positions 3 to 6 can be any amino acid.

<400> 40

Met Gly Xaa Xaa Xaa Xaa Gly Gly Pro Pro  
1 5 10

<210> 41

<211> 5

<212> PRT

<213> Artificial sequence

<220>

<223> linker consensus sequence

<400> 41

Gly Ser Gly Gly Ser  
1 5

<210> 42

<211> 4

<212> PRT

<213> Artificial sequence

<220>

<223> linker consensus sequence

<400> 42

Gly Gly Gly Ser  
1